Excerpts from Final Adopted MAY CREEK BASIN ACTION PLAN April 2001

[For complete Plan document, see Exhibit 12]

May Valley is a natural floodplain and historically has experienced periodic and sometimes extensive flooding. Through the years, this problem worsened as channelizing of streams and development in upland areas increased stormflows to the valley, and as natural deposition of sediment in May Valley continued to reduce the conveyance capacity of the May Creek channel. May Creek canyon, through which lower May Creek flows, is an undeveloped park in the Cities of Renton and Newcastle where soft trails may be built in the future. Expansion of access to this park and the purchase of additional lands are priorities for the cities. Many residents view May Creek Park as an important community amenity. Erosion and sedimentation occur as a result of natural processes in all stream systems. Much of the erosion and sediment transport in May Creek is a result of development in the basin. The May Creek basin continues to provide high quality tributary habitat to the Lake Washington watershed; however, use of May Creek by salmon and other wildlife is declining due to habitat loss, erosion, sedimentation, and deteriorating water quality. As more development occurs throughout the basin, many of these problems are anticipated to worsen unless steps are taken to address these issues. For this reason, measures are needed to restore the natural functions of the basin and maintain the quality of life for those who live and work in the basin.

The density of upland development is a key contributing factor to the flooding that occurs in May Valley. The plan recommends that zoning densities not be increased above existing levels in upland areas draining to May Valley, including adopted pre-zoning for unincorporated areas to be annexed, unless the stormwater impacts of the increased density can be fully mitigated. As land use in the May Creek drainage area has changed, heavily vegetated areas have been replaced with pavement and structures. This conversion of land cover has disrupted the natural hydrologic cycle; ultimately, this significantly increases runoff originating in these areas. In proposing limitations on the density of new development and the retention of strict clearing standards, the Basin Action Plan limits the increase in future runoff to May Valley while supporting a growth management goal of maintaining the character of rural areas in King County.

Along with restrictions on zoning and clearing, the primary recommendations involve strict Retention/Detention standards for future development. When implemented, these measures will contribute to the protection of downstream areas from increases in both peak flows and flow duration.

May Valley is largely composed of a natural floodplain that periodically filled with floodwaters even before this region was settled. Development in the basin has reduced forest cover, increased impervious surface area, and filled in wetlands. All of these changes have aggravated the valley's natural, periodic flooding regime. The amount of effective impervious area has

increased to a basinwide average of 7% under current conditions. Most of this impervious surface is in the Lower Basin Subarea. Without any changes in zoning or development protections, the amount of impervious surface is expected to increase to 12% in the future. The change from a predominantly forested basin to one with an increasing percentage of impervious surface has had significant hydrologic implications. This change has caused the amount of stormwater runoff to increase throughout the basin, dramatically in some locations. Flood flows have increased as well, resulting in additional erosion of hillsides, flooding and sediment deposition in the valley, erosion in the canyon downstream of the valley, and flooding and deposition near the mouth of May Creek.

2. INTRODUCTION

2.1 About This Plan

This plan has been funded by King County and the City of Renton Surface Water Utility. The City of Newcastle incorporated after a substantial portion of the plan was completed. It has not provided funds for the plan, but has participated in its development in a review capacity. The City of Newcastle has completed and adopted its own Stormwater Management Comprehensive Plan (SMCP). While Newcastle's SMCP and this plan contains similar recommendations for surface-water management projects derived from the hydrologic conditions in the basin, the Newcastle SMCP addresses surface-water concerns for areas outside of the May Creek basin within the City. The City of Newcastle will coordinate with King County and the City of Renton in commencing implementation of recommended actions before completion of the SMCP if circumstances warrant more immediate action for certain projects. Newcastle formally adopted this plan in late 2000, and the City of Renton plans do so in April or May 2001.

Basin planning has been undertaken recognizing that urban activities contribute to changes in the natural characteristics of watersheds that frequently threaten healthy watershed systems. The focus of basin plans has been on reducing flood damages, protecting stream and wetland habitats, and improving the quality of surface and groundwater. The primary goals of the May Creek Basin Action Plan are the following:

- _ Reduce the threat of flooding to citizens in the May Creek Basin;
- _ Make infrastructure improvements that will facilitate stormflow conveyance, stabilize stream banks, and reduce erosion;
- _ Protect and enhance fish and wildlife habitat and water quality in the basin; and
- _ Take reasonable steps to prevent existing problems from worsening in the future.

This plan contains strategic recommendations to correct or reduce problems identified through the planning process. The plan also provides guidelines for future actions with the objective to improve overall conditions within the basin. As with all natural systems, watersheds are comprised of relationships between land use, water quantity, water quality, and aquatic habitat. As a result of these relationships, activities in one part of the basin influence, and in turn are influenced by, activities elsewhere. These relationships are particularly relevant to the consideration of proposed remedies to problems in the basin. For example, erosion control cannot take place effectively without consideration of the high water flows that cause erosion, and aquatic habitat cannot be maintained or restored and effectively managed without considering the land uses and hydrologic conditions that surround important habitat areas.

2.4 CONDITIONS WITHIN THE BASIN

Recent basin management planning began with preparation of the *May Creek Current and Future Conditions Report* issued by King County and the City of Renton in August 1995. This report assesses current conditions and predicts future trends in the May Creek basin. The report also identifies significant conditions and issues to be addressed in the May Creek Basin Action Plan.

Key findings of the *Current and Future Conditions Report* include the following:

_ The dominant hydrologic function of the May Valley is storage of floodwaters. Substantial storage occurs in the valley floodplain. In performing this function, May Valley is sometimes subject to long-duration flooding, which in turn directly contributes to reduced peak flood flows downstream. Removal of the substantial storage in May Valley could increase these downstream flood flows by as much as 30%.

Currently, retention/detention ponds are not required for most low-density residential development in areas draining to May Valley. Furthermore, reductions in flooding that would result from construction of such ponds would be limited because flooding in the valley is primarily caused by the volume of water, which would be delayed, but not reduced, by such retention and detention structures.

The most extensive flooding problems in the May Creek basin occur in May Valley. Through the years, development, dredging, and filling within the May Creek floodplain have altered natural drainage patterns, reduced natural storage areas, and placed structures in the path of floodwaters. Runoff from future development is expected to cause an increase in flood volumes in the valley, resulting in longer durations of floodwater inundation and greater frequency of flooding, but only slightly greater flood depths.

Residential development in May Valley, with the establishment of homes and properties in the valley's wetland and floodplain complex, has resulted in occasional damage to private structures and frequent flooding of pastureland. It is estimated that at least seven homes and one business are located within the 100-year floodplain. Peak flows have increased moderately in the valley, on the order of 15 to 20% greater than the predevelopment conditions for the 2-, 25-, and 100-year events. Flooding, however, is not solely determined by the size of peak flows; it is also a function of floodwater volumes and flow durations. High groundwater levels in winter are likely a factor as well. Several local properties experience pasture flooding and ponding of long duration (sometimes over several months). The valley floor becomes saturated, and the low gradients of the floodplain overbanks do not permit drainage to occur efficiently. Similarly, when major storm-related flooding occurs, the floodwaters recede very slowly. It is this frequency and duration of even low-depth flooding, rather than the size of flood peaks, that has increased substantially over the years as development of upland areas has occurred.

While May Valley is the site of the most extensive flooding in the basin, less severe drainage problems occur in other parts of the basin. Localized drainage problems in the basin are mainly related to past alteration of natural stream channels, filling natural detention areas,

undersized conveyance systems, development with inadequate mitigation, or improper installation of drainage measures, which results in increased runoff to downslope properties. Of the current localized drainage problems, the majority are concentrated in urbanized portions of the basin.

Sediment deposition has occurred from natural erosion but has been accelerated by increased storm flows from development and changes in local land cover. Sediment deposition has been a problem in two important locations within the basin. First, sediment eroded from streams in the Highlands and East Renton Plateau is gradually reducing the capacity of the May Creek channel in May Valley. This sediment accumulation has contributed to worsening flood problems and degradation of fish habitat. Secondly, increased flows have resulted in erosion of the May Creek Canyon and lower basin tributaries, and this sediment is interfering with commercial business operations on Lake Washington where the sediments are deposited. An average of approximately 2,000 cubic yards per year are dredged from the mouth of May Creek on Lake Washington.

Stream flows are expected to increase as development expands throughout the basin, especially in the Highlands and East Renton Plateau Subareas. This will increase erosion and downcutting of stream channels, leading to increased sedimentation. In addition, loss of stream-side vegetation, poor construction practices, and quarry runoff also contribute to erosion and sedimentation within the basin.

Nonpoint pollution is another concern within the basin. Major sources of nonpoint pollution include runoff from roads, quarries, developing sites, and commercial operations; animalkeeping practices and grazing in riparian areas; and failing septic systems. Urbanization of the basin is expected to increase nonpoint pollution concentrations, thereby affecting water quality and aquatic habitat values.

High concentrations of fecal coliforms and total phosphorus are of particular concern to water quality. Improper livestock management practices and failing septic systems are the primary causes of fecal coliform problems. Consistently high fecal coliform levels were found in the May Valley and upper basin areas, as well as at the mouths of Honey and China Creeks. As well as impacting instream habitat, high levels of fecal coliforms can threaten recreational uses such as swimming and wading. Fecal coliforms also could contaminate groundwater, a cause for concern as this area is within the City of Renton's aquifer protection zone. Stormwater phosphorus loading has resulted in concentrations within May Creek well above U.S. Environmental Protection Agency guidelines for streams that discharge to lakes. The concentrations are sufficiently high to potentially threaten aquatic life. Phosphorus levels are expected to increase as further development in the basin occurs.

Development activities within the basin have historically degraded stream and wetland habitats. Filling of wetlands, increased stormwater runoff and peak stream flows, addition of sediment and pollutants to the water, and removal of coniferous forest cover have contributed to the degradation of local habitat in the basin.

The lack of adequate quantities of large woody debris (LWD) within basin streams limits habitat complexity and results in a relative scarcity of pools, an important component of

stream habitat. For woody debris to be effective, it must be of sufficient size to alter instream hydraulics and durable enough to remain in place for many years. The lack of high quality LWD accelerates downcutting in stream channels and the build up of sediment at the mouth of May Creek.

Wetlands within the basin also have been threatened by development. Almost every one of the basin's nearly 80 identified wetlands has been disturbed by deforestation, filling, draining, agricultural practices, or buffer removal, with much of this disturbance occurring after the wetlands were first inventoried in 1983. Without proper land use controls, stream, wetland, and lake habitats will continue to be damaged by existing uses and future development.

Subsequent to identification of existing conditions and areas of concern in the *Current and Future Conditions Report*, project consultant Foster Wheeler Environmental Corporation issued two reports for review by King County and the City of Renton analyzing possible solutions. The *May Creek Basin Phase 1 Solutions Analysis* was issued in November 1995, followed by the *May Creek Basin Phase 2 Solutions Analysis* in May 1996. Both of these reports include assessments of the main problems within the basin. The *Phase 1 Solutions Analysis* combined problems into five categories: May Valley flooding, Lower May Creek sediment erosion and deposition, major site erosion, May Valley habitat problems, and May Creek basin habitat restoration and enhancement. Preliminary recommendations were included within the Phase 1 Analysis, which led to the considerations made within the Phase 2 Analysis for a set of comprehensive approaches to address basin problems.

2.5 POTENTIAL SOLUTIONS

The solutions recommended in this plan were developed to help basin jurisdictions meet the primary goals noted on page 2-1. These solutions use the results of the solutions analysis and the key findings in the Conditions Report and recognize that measures taken to resolve the identified problems must occur in the context of existing land uses in the May Creek basin. In the case of peak flood flows, it is acknowledged that much of the basin has already been either developed or platted and is therefore vested as far as future locally mandated drainage requirements are concerned. In some instances, future development is expected to occur at densities below the threshold at which local stormwater management standards would be triggered and mitigation measures would be implemented. Thus, new approaches to resolving future flow-related problems that are reliant on stricter development standards would have limited utility. This plan can effectively influence stormwater impacts from the small areas of higher density development through the specification of appropriate retention/detention standards as contained in the SWDM. Given the financial limitations associated with implementation of this Basin Action Plan or plans like it, all of the flooding problems in May Valley cannot be solved at once. Goals for reducing flooding under this plan are, in order of priority, as follows: (1) to eliminate significant public safety hazards; (2) to alleviate frequent flooding of homes and sole access roads; (3) to reduce flooding of septic systems and wells; and (4) to reduce the financial and social burden of pasture flooding. Key limitations in addressing flooding concerns are that these goals must be met without causing downstream impacts or impacts that substantially affect species protected by the ESA, as well as meeting all other relevant permitting requirements.

Increases in erosion resulting from increasing stream flows are difficult to resolve; however, an

array of instream measures can be effective at reducing the rate of downstream sediment transport while also increasing habitat area. Resolving erosion problems near their source is the most cost-effective way of addressing such problems, but the discussion above regarding limitations in mitigation for future development has implications for sediment as well. Beyond this recommendation, it will be important for regulating agencies to recognize that sediment deposition is a problem in portions of May Creek as they consider permits for future basin activities.

3. RECOMMENDATIONS

3.1 SUMMARY OF PRIMARY RECOMMENDATIONS

Potential solutions to problems in the May Creek basin have been categorized as **primary recommendations** or **secondary recommendations**. Primary recommendations are either policy decisions that do not require additional public funding, or programs and projects that are anticipated to be implemented within the next three to five years, based on the availability of funding and their relative importance. Secondary recommendations, while considered important, involve projects for which funding is not ensured, and for which the time frame for implementation may extend beyond the three- to five-year interval after adoption of the plan. Concurrent with the development of this plan, basin jurisdictions have undertaken a range of activities that support the broad long-term goal of improving basin conditions. While many of these actions did not directly overlap with discrete, project-oriented recommendations proposed during plan development, several of these actions did do so. These recommendations, as they have largely been acted upon, have been removed from the list of primary recommendations and presented in Appendix G with a description of their current status.

Primary recommendations are summarized below. More specific details about the recommendations follow the summary. A map showing the locations of the projects identified in the primary recommendations is provided in Figure 3-1. Secondary recommendations are presented in prioritized order in Table 3.3 at the end of this chapter.

Basinwide Recommendations

- 1. Establish and Enforce Requirements for Runoff Retention/Detention, Forest Retention, and Water Quality Facilities for Site Development
- 2. Develop Basin Stewardship and Community Coordination and Participation through the Creation of a

May Creek Basin Steward

3. Establish a Monitoring Program to Determine the Effectiveness of Implemented Plan Actions

May Valley Subarea

- 4. Provide Cost-Sharing and Technical Assistance for Flood Protection in May Valley
- 5. Remove Flow Obstructions from the Channel of May Creek in May Valley
- 6. Restore Flows Diverted from Tributary 0294 back into Tibbetts Creek
- 7. Enlarge the Culvert under S.E. May Valley Road at the East Fork of May Creek
- 8. Protect Habitat at the Confluence of May Creek and Its Tributary Streams

Lower Basin Subarea

9. Work Cooperatively to Protect the City of Renton Drinking Water Supply

10. Facilitate Permitting for May Creek Delta Dredging

- 11. Stabilize the Slopes at the Most Significant Erosion Sites in May Creek Canyon Related to Surface Runoff Discharges
- 12. Place Large Woody Debris in May Creek in May Creek Canyon
- 13. Plant Conifers Throughout the Riparian Area in May Creek Canyon
- 14. Improve Lake Boren Water Quality
- 15. Improve Boren Creek Fish Passage at S.E. 89th Place
- 16. Improve the Newcastle Railroad Embankment Outlet

East Renton Plateau and Highlands Subareas

17. Require Full Mitigation for Future Increases in Zoning Density in Areas Draining to May Valley

May Valley and Highlands Subareas

18. Reduce the Potential for Negative Water Quality Impacts Originating at the Basin's Quarry Sites

3.2 DETAILED PRIMARY RECOMMENDATIONS

3.2.3 Lower Basin Subarea

10. Facilitate Permitting for May Creek Delta Dredging

Implementing Agencies: King County Water and Land Resources Division, City of Renton (in cooperation with U.S. Army Corps of Engineers, Washington State Department of Fish and Wildlife, U.S. Environmental Protection Agency, Washington Department of Ecology, National Marine Fisheries Service, and Muckleshoot Indian Tribe)

Cost: Negligible

Recommendation: Assist the property owner at the May Creek Delta in obtaining permits needed for future dredging of sediments from May Creek.

Discussion: The Barbee Mill Company is located on the May Creek Delta, where sediment deposition occurs naturally. Increases in erosive stormflows, associated with basin clearing and land development, have increased the need for dredging to allow the mill to continue its commercial operations. While the mill owner currently has an active permit for dredging, each permit cycle lasts only five years. Dredging will have to be undertaken more frequently in the future to maintain adequate access for the mill operation, particularly as a result of increased sediment transport as further development occurs in the basin. In the future, the mill may sell its property on the delta for a mixed-use waterfront development.

In the event that the mill property on the May Creek Delta redevelops in the future, opportunities to enhance May Creek habitat and reduce the need for maintenance dredging should be explored. Although a feasibility study of this option has not been undertaken, it is possible that modifying the May Creek channel could reduce the need for maintenance dredging and provide a unique opportunity to establish an improved habitat area within the lakeshore commercial area, allowing the realization of environmental and economic benefits. Any major redevelopment project also should consider opportunities for acquisition and restoration/preservation of riparian lands

adjacent to the May Creek Park system. Until funding for such a project becomes available, continued dredging is the only viable alternative for maintaining commercial operations at the mill. Such dredging has no downstream impacts, and the impacts on channel habitat are localized and minimal. This recommendation recognizes the need for dredging to continue until a long-term solution can be identified and funded. Even a long-term solution likely will include some need for ongoing maintenance dredging. Therefore, this recommendation proposes that the City of Renton continue to expedite city permits for dredging activities, and that Renton and King County provide technical assistance to the property owner for acquisition of other necessary

permits as needed and as resources allow.

11. Stabilize the Slopes at the Most Significant Erosion Sites in May Creek Canyon Related to Surface Runoff Discharges

Implementing Agencies: City of Renton, King County Water and Land Resources Division Cost: \$550,000

Recommendation: Implement a program of erosion-control measures at the most important surface runoff-induced erosion sites in the lower basin. Given the high cost of stabilizing these sites and the significant changes in the canyon's ravine walls due to storms during the winter of 1996-97, prioritization among several identified candidate sites will be necessary before design of these measures is begun. The highest priority sites identified at this time include Honey Creek at River Mile 0.5, and May Creek at River Mile 1.2 and River Mile 1.9.

Discussion: Poorly functioning surface-water conveyance systems have caused large landslides and major localized erosion along May and Honey Creeks in several locations. This erosion has increased the amount of sediment entering these systems and reaching the May Creek Delta at Lake Washington. Because erosion at these sites is ongoing, conditions are expected to worsen unless stabilization is provided. Honey Creek is designated a LSRA from River Mile 0.0 to 0.35, and May Creek has a LSRA designation from River Mile 0.2 to 3.9. As defined by King County, LSRAs have significant aquatic habitat value and provide important areas for plants and wildlife. Both LSRAs could be affected by further erosion resulting from continuing destabilization of these sites. This recommendation would allocate funding to stabilize the two or three most important erosion problems in May and Honey Creek Canyons. After plan adoption, an interjurisdictional technical team representing King County and the City of Renton would identify the most appropriate sites for stabilization. Identification of these sites would be based upon their size, amount of contribution to the May and Honey Creek sediment problem, expected costs, feasibility of stabilization, and the cause of the erosion problem. Funds would be targeted for sites where the effects of stormwater are clearly the major contributor to ravine wall slope failure. Sites where large slides are occurring naturally would not be targeted.

Project design would begin once selected sites are identified. Designed solutions are most likely to involve measures to limit the impact of surface-water runoff on these slopes to prevent aggravation of existing problems. Examples of slope problems and possible solutions include the following:

_ Active erosion of canyon walls at River Mile 1.2 of May Creek, where drainage and stormflow from an apartment complex have been concentrated. Chronic erosion and deposition of fine sediments into May Creek is occurring with resultant delivery of sediment

to the May Creek LSRA and the mouth of May Creek. In addition, approximately 6 to 8 feet of fill is encroaching upon the edge of the canyon wall, and revegetation of the fill is inhibited by the steepness and looseness of the material.

A solution at this site could involve diverting the runoff, which currently flows over the valley wall, into storm drains. If diversion is not possible, directing flows into a new flexible plastic pipe down the valley wall could be attempted. A small energy dissipater and detention pond on the floodplain at the foot of the hill might be necessary as well. The slope itself could require installation of backfilled slope breakers across the face of the eroding slide, with subsequent revegetation.

_ At River Mile 1.9 of May Creek, an 18-inch corrugated metal pipe has separated at the joint, resulting in two slope failures that deposit sediment into the May Creek LSRA and the delta. Repair work at this site could include measures such as installing plastic pipe down the slope; slope breaks to hold soil on the steep, eroded face; and revegetation. Measures such as these would prevent future erosion and avoid delivery of coarse sediment to the creek from additional slumps, thereby improving water quality and aquatic habitat.

Upon adoption of the plan, implementation will involve final selection of the most appropriate sites for stabilization, as well as design and construction of appropriate, cost-effective measures.

12. Place Large Woody Debris in May Creek in May Creek Canyon

Implementing Agencies: City of Renton, City of Newcastle, King County Department of Natural Resources

Cost: \$200,000 - \$300,000

Recommendation: Place large woody debris in key locations in May Creek Canyon to provide stream channel protection and aquatic habitat, and to reduce sediment delivery to the May Creek delta.

Discussion: Most creeks in the May Creek basin lack large woody debris, an important component of healthy stream systems. This is because vegetative cover in riparian areas has been depleted through the years, reducing recruitment sources of large woody debris for these waters. Large woody debris provides part of the structure that helps hold stream channels and banks together, and it creates pools and channel complexity, which are important components of aquatic habitat. In addition, large woody debris regulates sediment transport in streams, thus reducing the magnitude of sediment deposition downstream. Although large woody debris is needed throughout the basin, this recommendation recognizes placement within the May Creek Canyon as the main priority at this time, with similar placements recommended elsewhere as funding and implementation commitments are identified. Additional large woody debris would improve aquatic habitat, reduce sediment loading downstream, and protect LSRA habitat values. Because this portion of May Creek is located within a public park, increased habitat values also could present educational and interpretive opportunities.

4. MANAGEMENT PROGRAM EXPECTATIONS

A number of goals are associated with each of the Recommended Actions contained in Chapter 3. This chapter describes the benefits and changes that are expected to accrue as a result of pursuing the recommendations presented in the preceding chapters.

4.1 NEAR-TERM IMPROVEMENTS

This discussion focuses on improvements expected to result from the measures presented as primary recommendations in the preceding chapter.

A guiding principle in the development of this plan has been to focus on a set of issues of primary importance in the basin, recommend actions to address those issues, and, most importantly, identify reliable sources of funds to support undertaking those actions. As a result of this focus, at the end of the three-to-five-year implementation time frame identified for this Basin Action Plan, all of the primary recommendations should have been implemented. It is possible that several of the secondary recommendations could be in place at that time as well, depending upon the schedule for a number of major projects in the basin and the success of basin agencies in obtaining funds for these improvements. The response of federal, state, and local agencies and private interests to the listing of salmonid species under the ESA may make additional funds available for implementing a number of the actions suggested in the recommendations. Given the long-term outlook and strategy necessary to achieve species recovery, funding is reasonably likely to become available for basin priorities identified in the secondary recommendations in addition to new priorities identified for implementation beyond the five-year term that is the focus of this plan. Identification of, and coordination with, potential funding sources would be a responsibility of the Basin Steward. In considering the expected benefits of these recommendations, the near-term improvements are those most likely to be achieved through implementation of the primary recommendations. Although these measures will not resolve all the problems basin residents associate with May Creek, all the concerns identified in the Conditions Report, or all the problems likely to come to light through enforcement of the ESA, meaningful improvements are expected to occur in several significant areas, including the following:

_ Reduction in the frequency and duration of flooding in several areas, especially in May Valley.Residents would have an avenue for technical support and assistance for locally based flood reduction/habitat improvement projects. In addition, properties prone to chronic flooding may be acquired for permanent flood relief to inhabitants. Quicker drawdown of flooding in May Valley will lessen health concerns and nuisances caused by private flooding. _ Reduction of contributions from the May Creek basin to the factors for decline of wild native salmon stocks in the Lake Washington watershed, particularly those salmon stocks listed under the ESA. In addressing the degradation of salmon habitat resulting from activities taking place in the basin, requirements from the Clean Water Act will be addressed as well, reducing the likelihood that additional substantive regulatory action would be necessary to address water quality impacts that affect listed salmonids. Although historically the integration of water quality and ESA-related species protection concerns has not occurred, responses to species listings in Puget Sound will include such integration. Such integration should help streamline local efforts that support salmon recovery and respond to federal regulatory action.

_ Elimination of a potential safety hazard in the basin through improvements to the Newcastle railroad embankment outlet. Although the *Conditions Report* concluded that failure of the embankment is not imminent and that the potential threat to downstream homes and property is not great, the current condition of the outlet is unacceptable. This remedial action, along with implementation of the recommended monitoring plan, would prevent potential blockages of the outlet, removing the threat of failure.

_ Improvement in May Creek Delta conditions through a localized reduction in erosion from several discrete sites and a reduced rate of increase in sediment delivery to the mouth of May Creek. Although this reduction is an expected near-term benefit of improvement measures, the advantage over current conditions and the ability to moderate future sediment contributions will ultimately be determined by the timing of future development buildout. The acknowledgment by all permitting agencies that dredging of the delta is reasonable, through the recommended facilitation of permit acquisition, will allow dredging to continue. Prospects of proposed land use changes at May Creek Delta could create the opportunity for initiation of a major habitat restoration project at the delta. The success of such a project would largely depend on the effectiveness of proposed improvements in the upper basin.

_ Improved local habitat in May Creek Canyon and on at least one tributary to May Valley. Improvements to the riparian corridor will begin to ensure that habitat can remain stable over longer periods of time in the future. Critical fish passage problems would be eliminated with the result of improved upstream access to spawning and rearing habitat for a variety of fish species.

Development and implementation of Farm Management Plans for many properties in May Valley, resulting in cooperative efforts between agencies and landowners, and a reduction of nonpoint pollution. Farm Management Plans have been or are currently being prepared for some properties in the Valley. This Basin Action Plan recommends that one focus of the Basin Steward be to inform landowners about the availability of technical assistance to develop Farm Management Plans and to assist with proper implementation of measures in the Farm Management Plans. Establishment of improved stream buffers through this approach would be of significant benefit to water quality. Increased farm production would be a secondary benefit of this approach given the dual focus of Farm Management Plans: water quality protection and farm productivity. This could significantly improve water quality conditions in the basin, particularly with regard to fecal coliforms and high stream temperatures, which now present nearly lethal conditions for salmon.

Financial incentives resulting in opportunities for property owners to retain their land as open space or in small agricultural uses. The results of such efforts are expected to help achieve and maintain a low-density, rural atmosphere in many parts of the May Creek basin, particularly along the upper basin areas of May Creek and its tributaries.

An increased awareness by basin residents that their actions have impacts on all water resources, including streams, wetlands, and groundwater (and the species dependent upon them), within the basin. Through this awareness, opportunities for residents to participate in habitat improvements and monitoring should increase. Contributions of volunteers interested in improving local conditions and enhancing the future quality of life within the May Creek basin are an integral part of plan goals and objectives. Educated and active residents, working with the proposed Basin Steward, are expected to play an important role in taking advantage of many opportunities for both near-term and long-term improvements and protective measures for basin resources. Educational information and programs will provide residents with an increased understanding of the connections between all water resources, aquifers, and groundwater protection.

4.2 LONG-TERM IMPROVEMENTS

In addition to the improvements that accrue from implementation of primary recommendations over the three-to-five year period following plan adoption, improvements will accrue over the long term as a result of implementation of both the primary and secondary recommendations. Given the uncertainty of the funding mechanisms for the secondary recommendations, realizing the improvements from those projects is less certain than with the primary recommendations. Secondary recommendations are likely to be implemented concurrently with the basin development that is expected to occur under existing zoning designations. The timeline for these secondary improvements may be as long as 15 to 30 years.

Through mitigation measures associated with future development, and through direct interaction between basin residents and governmental agencies (including the May Creek Basin Steward), significant changes in the character of the basin are expected to be achieved as this plan is implemented. Hazardous flooding problems in the basin will be significantly reduced, and all public and sole residential access roads will be improved to be passable under at least 25-year flow conditions. A continuous riparian corridor along the entire mainstem of May Creek will be created. Development of this riparian corridor would rely upon the use of primarily native plant species. Riparian plantings in combination with fencing, where appropriate and necessary,

would control livestock access to the riparian zone. These actions are expected to increase the diversity and number of fish and wildlife associated with riparian areas.

Additionally, the amount of coniferous vegetation throughout the basin will increase significantly, resulting in improved habitat for both native and non-native wildlife species. An increase in coniferous vegetation would also reduce the expected post-development increase in basinwide surface-water runoff. May Creek will have measurably lower stream temperatures and higher dissolved oxygen levels in the May Valley reach, improving habitat for salmon, trout, and other aquatic species. Finally, the May Creek Delta on Lake Washington will see improved habitat values and reduced sediment accumulation.

Ultimately, through Farm Management Plans and programs that make conservation measures attractive to landowners, this plan presents a movement away from regulatory management and toward an incentive-based approach for protecting basin resources. It represents a cooperative effort between local government and property owners in determining how to alter practices that may lead to flooding of downstream or adjacent property. At the same time, it provides for collaboration between government and residents on restoration and protective measures for the natural resources of the basin. In this sense, one of the most important long-term benefits this plan may achieve is acknowledgment of the significant role of natural resources within the watershed and the need for a locally based, cooperative response to conserving, protecting, and monitoring the integrity of the May Creek basin to benefit present and future generations.

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February 10, 2009

Erika Conkling
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Citry of Renton
Department of Community and Economic Development
1055 South Grady Way
Renton, WA, 98057

Subject: Shoreline Master Use Program Planning

Dear Erika Conking:

The City of Renton is to be applauded for reconsidering its Shoreline Master Program. As presented before the Planning Commission, the intent of the Shoreline Management Act of 1972 is "to prevent the inherent harm in an uncoordinated and piecemeal development of the state's shorelines." Currently, the City of Renton is conducting an Inventory and Characterization of "ecosystem-wide processes and ecological functions ... to identify specific measures necessary to protect and/or restore the ecological function and ecosystem-wide processes."

Within the introductory analysis presented to/by the Planning Commission, there are numerous examples of No Net Loss opportunities and existing constraints within the shorelines of the City of Renton. The constraints and opportunities are many. The May Creek Basin is a good example of these multiple conflicting opportunities and constraints although similar problems exist on Coal Creek to the north. The Shoreline Master Program identifies the May Creek Delta as an opportunity (1) to allow the delta to develop naturally and (2) to prohibit dredging. Excepting the unsupported bias against dredging, the issue is defining the opportunity for "natural development" within the context and constraints of an "unnatural" build-out.

The May Creek Basin Action Plan (2001), as formally adopted the City of Renton, recognized the extraordinary constraints and harms arising from uncoordinated and piecemeal development in the May Creek Basin. Development in the May Creek Basin and the consequent deterioration of the natural environment has substantially exacerbated flood conditions. As provided in Appendix H of the May Creek Basin Action Plan:

Analysis of past, current and probable future storm runoff and flooding conditions of the May Creek Basin indicate that flood flows have increased significantly and will likely continue to increase as the basin is developed.

Increased flood flows (flux in a hydrodynamic sense) in the Basin, during severe storm events, have increased sediment deposition in May Creek. As sediment accumulates in the lower

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reaches of May Creek the impacts of increasing erosional flood flows are further compounded by reduced channel capacity.

In lieu of coordinated region action, the Barbee Mill Company for over 50 years conducted maintenance dredging in the delta to periodically mitigate the impacts of sediment accumulation to protect their commercial interests and to mitigate the upstream erosional impacts arising from uncoordinated and piecemeal development in the May Creek Basin.

In 2006 the Barbee Company sold the former lumber mill property for redevelopment as a Planned Unit Development. Barbee retained a small portion of the southernmost property immediately south of the May Creek Delta. With the sale of the mill property the Barbee Company withdrew their permit application for maintenance dredging of the May Creek Delta while retaining their application for maintaining navigational depths immediately in front of the boathouse for access to the boathouse and water dependent uses protected by the Shoreline Management Act. A longer term permit from the US Army Corps of Engineers was recently granted for this work. Habitat enhancement measures incorporated into the 10 year dredging permit include the following:

- Renovation of the boathouse to create a more fish friendly and visually appealing lakeside structure:
- Removal of treated wood piles and replacing then with steel;
- Placement of fish rock or spawing materials at the base of existing rockwork immediately south of the boathouse;
- Steel grating on floats and boathouse walkways to increase light transmission; and
- Native planting buffer zone at the shoreline.

Maintenance dredging at the boathouse will provide navigational access for many years to come. Concurrent habitat enhancements will help protect shoreline resources, and contribute to restoration of ecological functions in keeping with the ecological objectives of the Shoreline Management Act.

Since the May Creek Delta was last dredged in 2001, concurrent with the adoption of the May Creek Basin Action Plan, there has been continuing and substantial upstream erosion and deposition from severe storm events. Extension of the delta further into Lake Washington as a consequence of high energy upstream erosion is not a natural development. Rather, it is the failure to manage shorelines and contributing constraints in favor of uncontrolled and piecemeal development in the May Creek Basin.

All of this is well and good, the real difficulty is finding solutions and agreements to manage both the opportunities and the constraints. Thank you for the opportunity to present these comments. I look forward to discussing this perspective with the City of Renton.

Sincere,

Lloyd & Associates, Inc.

R. Michael Lloyd, PhD/JD